

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF JONATHAN CREEK WATER	)	
DISTRICT FOR CERTIFICATE OF PUBLIC	)	
CONVENIENCE AND NECESSITY, LONG TERM	)	CASE NO. 94-073
FINANCING BY KIA: A GENERAL RATE	)	
ADJUSTMENT AND REQUEST FOR A VARIANCE ON	)	
FINANCIAL DATA SUBMITTED	)	

O R D E R

Jonathan Creek Water District ("Jonathan Creek") completed the filing of its application on March 23, 1994 for Commission approval of proposed construction, financing and a general rate increase. Commission Staff, having performed a limited financial review of Jonathan Creek's operations and a cost of service study, has prepared the attached Staff Report containing Staff's findings and recommendations regarding Jonathan Creek's application. All parties should review the report carefully and provide any written comments no later than June 24, 1994. The Commission should also be informed by June 24, 1994 if any party intends to testify or present other evidence at the hearing scheduled July 7, 1994.

IT IS THEREFORE ORDERED that:

1. All parties shall have until June 24, 1994 to provide written comments regarding the attached Staff Report.
2. Any party, including the Applicant, who intends to participate in the hearing shall, no later than June 24, 1994, provide the Commission with:

(a) A written list of witnesses and a brief summary of their anticipated testimony; and

(b) A list of exhibits that will be introduced.

3. Any party who does not provide their witness list, exhibits or prefiled testimony will not be permitted to testify or offer evidence at the hearing.

4. This Order supersedes the Commission's prior Order entered on May 13, 1994 except for public notice provisions.

5. The Applicant shall, no later than June 24, 1994, provide the Commission and all parties with a list of each witness who will be available for questioning on each item contained in the application or provided to Commission Staff during the course of their review.

Done at Frankfort, Kentucky, this 10th day of June, 1994.

PUBLIC SERVICE COMMISSION

  
For the Commission

ATTEST:

  
Executive Director

COMMONWEALTH OF KENTUCKY  
REPORT THE PUBLIC SERVICE COMMISSION

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STAFF REPORT

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Public Utility Financial  
Analyst  
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Prepared By: Carryn Lee  
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Analyst  
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and Sewer Rate Design Branch  
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Public Utility Rate  
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and Sewer Rate Design Branch  
Rates and Research Division

STAFF REPORT  
ON  
JONATHAN CREEK WATER DISTRICT  
CASE NO. 94-073

A. Preface

On February 22, 1994, Jonathan Creek Water District ("Jonathan Creek") submitted an application to the Kentucky Public Service Commission ("Commission") seeking approval of its proposed construction, financing and water rate increase. The application was considered filed on March 23, 1994, when all deficiencies were cured. In its application Jonathan Creek requested rates that would generate approximately \$697,250 in annual revenues. This represents an increase of \$255,805, or 57.95 percent, over reported test year revenues from water sales of \$441,445.

In order to evaluate the requested increase, Commission Staff ("Staff") chose to perform a limited financial review of Jonathan Creek's test year operations. In its application Jonathan Creek used the calendar year end 1992 as its test year. However, since the 1993 annual report had been filed with the Commission by the date of Staff's field review, Staff chose to use 1993 as its test year since it provided more current information. Jack Scott Lawless of the Commission's Division of Financial Analysis began the review on March 15, 1994 at the office of Jonathan Creek in Benton, Kentucky. Carryn Lee and Brent Kirtley of the Commission's Division of Rates and Research performed a review of Jonathan Creek's reported revenues and proposed rate design at the Commission's offices in Frankfort, Kentucky.

The findings of Staff's review are contained in this report. Ms. Lee and Mr. Kirtley are responsible for the sections related to operating revenues and the cost of service study. The remaining sections of this report were prepared by Mr. Lawless. Based upon the findings in this report, Staff recommends that Jonathan Creek be allowed to increase its annual operating revenues to the requested amount of \$697,250.

#### Scope

The scope of the review was limited to obtaining information to determine whether test period operating revenues and expenses were representative of normal operations. Insignificant or immaterial discrepancies were not pursued and are not addressed herein.

During the course of the review, Jonathan Creek was advised that all proposed adjustments to test year expenses must be supported by some form of documentation and that all such adjustments must be known and measurable.

#### B. Analysis of Operating Revenues and Expenses

##### Operating Revenues

Jonathan Creek reported revenue from water sales of \$445,528 in its 1993 Annual Report. Staff conducted a billing analysis using the billing register supplied by Jonathan Creek, which produced revenue from water sales in the amount of \$425,595. Jonathan Creek's billing register contained monthly sales figures that totalled \$425,529, nearly identical to Staff's calculations. Staff adjusted the revenue total

from the Annual Report by deducting \$19,933 from reported water sales. Staff's billing analysis summary is attached as Appendix C.

Jonathan Creek's 1993 Annual Report also listed \$18,861 in other operating revenue. A discussion with Richard Boyd, the district's accountant, revealed that \$1,631 of this amount should be included as other operating income since the remainder is reimbursements for construction projects. Staff made the reduction adjustment of \$17,230 accordingly. Total normalized operating revenue has been calculated as follows:

1993 Annual Report Revenue from Rates	\$445,528
Billing Analysis Adjustment	(19,933)
Other Operating Revenue	18,861
Adjustment	<u>(17,230)</u>
Normalized Operating Revenue	\$427,226

For the purposes of this Staff Report, total normalized operating revenue shall be considered to be \$427,226.

#### Operating Expenses

In its application Jonathan Creek reported 1992 operating expenses of \$449,585 which it proposed to decrease by \$83,240. In its 1993 annual report Jonathan Creek reported operating expenses of \$382,424 which Staff recommends be increased by \$79,392. Jonathan Creek's and Staff's pro forma adjustments are discussed in the following sections of this report.

#### Salaries and Wages

For 1993 Jonathan Creek reported salaries and wages expense of \$100,821. Staff has increased this amount by \$19,927 to reflect the

current level of employees and their salaries. The following is an analysis of this adjustment by account title:

	Pro forma	Less: 1993	Adjustment
Water Treat Operation	46,575	(38,889)	7,686
Trans. and Dist. Operation	45,010	(37,582)	7,428
Customer Accounts	12,737	(10,635)	2,102
Administrative and General	<u>16,426</u>	<u>(13,715)</u>	<u>2,711</u>
Total	<u>120,748</u>	<u>(100,821)</u>	<u>19,927</u>

#### Purchased Power

In 1993 Jonathan Creek reported purchased power expense of \$26,747. During Staff's review of invoices it was discovered that an invoice totaling \$2,725.39 for purchased power had been recorded in the Administrative and General - Materials and Supplies expense account. Staff has reclassified this amount by increasing purchased power and decreasing A&G by \$2,725.

Jonathan Creek proposed to increase purchase power to \$35,000 due to the increased power load associated with its new facilities. After consulting with the Commission's Division of Engineering, Staff recommends that the Commission accept Jonathan Creeks pro forma level of purchased power. Accordingly, Staff has increased the adjusted purchased power amount by \$5,528.

#### Chemicals Expense

Jonathan Creek reported 1993 chemical expense of \$36,154. Its Engineer proposed to reduce this expense to \$11,370. This reduction is due to the difference in the chemical costs for treating ground water as

opposed to surface water. Staff agrees with Jonathan Creek's adjustment and has decreased 1993 chemical expense by \$24,784.

Depreciation

Jonathan Creek reported 1993 depreciation expense of \$86,166. In its application (Exhibit 8, Page 16, Item E) Jonathan Creek requested to recover \$109,000 annually for depreciation on the construction costs of the proposed plant. Staff is of the opinion that depreciation on Jonathan Creek's existing and proposed plant should be included in the calculation of pro forma revenue requirements. However, after discussion with the Commission's Division of Engineering, Staff recommends that 1993 depreciation be increased by \$97,115 as a result of the proposed plant and decreased by (\$7,571) to reflect the retirement of the old treatment plant for a net increase of \$89,544. This results in an adjusted depreciation expense of \$175,710. The following summarizes of the calculations of the above adjustments:



	<u>Cost</u>	<u>Useful Life</u>	<u>Depreciation</u>
North Marshall Connection	355,000	50	7,100
Water Lines	342,000	50	6,840
Water Wells	199,500	20	9,975
Treatment Plant	<u>1,791,000</u>	30	<u>59,700</u>
Sub-total	<u>2,687,500</u>		<u>83,615</u>
Engineering Design	160,000	34.4456 <sup>1</sup>	4,645
Engineering Inspection	40,000	34.4456	1,161
Legal	15,000	34.4456	435
Administrative	50,000	34.4456	1,452
Contingencies	<u>200,000</u>	34.4456	<u>5,806</u>
Sub-total	<u>465,000</u>		<u>13,500</u>
Total Increase	<u>3,152,500</u>		<u>97,115</u>
Existing Treatment Plant	<u>378,569</u>	50	<u>(7,571)</u>

Taxes Other Than Income Taxes

Jonathan Creek reported taxes other than income taxes of \$20,131 for 1993. Of this amount \$12,347 was associated with sales or school taxes. Jonathan Creek is acting as an agent of the taxing authorities to collect and remit these taxes. They should not be recorded as operating revenues or expenses. Staff has therefore decreased operating expenses by this amount.

Staff also recommends an adjustment to increase payroll tax expense to allow for FICA and Medicare taxes associated with the recommended

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<sup>1</sup> Based on weighted average of useful lives of construction costs.

increase in salaries and wages expense. Accordingly, payroll tax expense has been increased by \$1,524<sup>2</sup>.

#### Operations Summary

Based on the recommendations of Staff, Jonathan Creek's operating statement would appear as set forth in Appendix A of this report.

#### C. Debt Service Calculation

The Commission normally allows a 120 percent debt service coverage (DSC) on outstanding long-term debt. Using this methodology Staff has calculated a debt service requirement for Jonathan Creek of 398,284<sup>3</sup>.

#### D. Revenue Requirements Determination

Jonathan Creek has requested operating revenue from water sales of \$697,250. Based on the findings contained in this report Staff believes that Jonathan Creek could justify operating revenue from water sales of

<sup>2</sup>	Payroll adjustment	\$ 19,927
	FICA Rate	<u>7.65%</u>
	Increase	<u>\$ 1,524</u>
<sup>3</sup>	GE Loan #01-0337512	\$ 7,640
	GE Loan #01-0337510	8,420
	GE Loan #01-0337509	69,349
	GE Loan #01-0337507	5,039
	KIA	<u>237,101</u>
	Average Annual Debt Service Payment	327,549
	Plus: 20 percent DSC	65,510
	Loan Servicing Fee	<u>5,225</u>
	Total Requirement	<u>\$ 398,284</u>

\$855,135.<sup>4</sup> However, since Jonathan Creek's proposed increase will meet cash related expenses and debt service payments<sup>5</sup>, Staff recommends that the proposed revenue of \$697,250 be accepted by the Commission. Upon this recommendation it is necessary that Staff allocate the \$157,885 difference between Jonathan Creek's requested revenues of \$697,250 and Staff's calculated revenues of \$855,135 to the individual revenue requirement components as set out in Appendix A. Staff has allocated this difference using a weighted average of the revenue requirement items shown in Appendix A. The detailed calculations are shown in Appendix B.

If Jonathan Creek chooses to amend its application to reflect rates that will generate the revenue from water sales of \$836,381, it should do so when filing comments to the Staff Report. In the event that Jonathan Creek does request rates that differ from those previously noticed to its customers, it should be required to notify its customers of the new proposed rates in accordance with the Commission's regulations.

<sup>4</sup>	Adjusted Operating Expenses	\$ 461,815
	Annual Debt Service Requirement	<u>398,284</u>
	Total Revenue Requirement	860,099
	Less: Other Operating Revenues	(1,631)
	Interest Income	<u>(3,333)</u>
	Required Revenue	<u>\$ 855,135</u>
<sup>5</sup>	Requested Revenue	\$ 697,250
	Less: Operating Expenses Net of Depreciation	(286,105)
	Annual Debt Service	<u>(332,774)</u>
	Balance	<u>\$ 78,371</u>

Staff's findings in this report are contingent upon the approval of the requested construction and financing. In the event approval for any portion of the construction or financing is not obtained, the recommendations contained herein would change accordingly.

#### E. Cost of Service Study

Once revenue requirements have been determined, a cost of service study should be conducted to develop a rate schedule that reflects the actual cost of providing water service. A cost of service study also helps to insure that the rate schedule will produce the required operating revenue. The Commission recognizes the American Water Works Association's Manual M-1, Water Rates ("Manual M-1") as setting forth the appropriate methodology to be used when conducting a cost of service study of water utilities. The study requires allocation of costs among customers commensurate with their service requirements in order to recognize the differences in costs of furnishing service to different classes of customers.

#### Jonathan Creek's Proposal

Jonathan Creek filed a rate analysis in its application that was prepared by the engineering firm of Florence and Hutcheson, Inc. The proposal would result in an increase ranging from 46 percent for a 5/8-inch connection to 337 percent for a 6-inch connection.

Jonathan Creek's proposed customer charge was determined by multiplying the percent of total water used in each customer classification by the proposed debt service payment, then by dividing the determined debt coverage for each classification by the number of

bills in each classification. The remainder of the revenue requirement, including operating and maintenance expense and depreciation, was divided by the total water sold in order to obtain a proposed flat-rate per thousand gallons.

The proposal by Jonathan Creek is based on methodology recommended by the United States Environmental Protection Agency for designing rate structures for sewer utilities. The methods outlined in this proposal contradict the Manual M-1, which states that customer costs, such as meter reading, billing, collections, and accounting expenses, are not related to the quantity of water used since they do not vary according to water usage. Contrary to this fundamental principle of rate design, Jonathan Creek included all of the above costs into the cost of water. The Manual M-1 additionally recognizes that certain administrative costs are fixed and bear no relationship to the amount of water produced or purchased. Jonathan Creek also included all of the administrative and general costs into the proposed rate per thousand gallons.

#### Cost of Service Methodology

Staff prepared a cost of service study using the commodity-demand method for small water utilities as set out in the Manual M-1. A properly prepared cost of service study should reflect when a water system provides service to a number of different customer classes that have different water use patterns and demands. The commodity-demand method recognizes the different costs associated with serving both the residential and the large user. The commodity-demand method for small utilities recognizes that sufficiently detailed information needed to

prepare a more comprehensive study may not always be available from small utilities.

Using the commodity-demand method, costs are identified as being related to either Commodity, Demand, Customer costs, or Direct Fire Service. Since fire service is not a significant function of Jonathan Creek, that component was not utilized in this study. Costs allocated to the Commodity cost component include those costs that tend to vary with the quantity of water produced, such as the cost of chemicals and pumping power. Demand costs are costs associated with providing facilities to meet peak periods of use by system customers. Demand costs include transmission and distribution costs and source of supply. Customer costs are those incurred to serve customers regardless of the amount of water used, and include such costs as billing and collection expenses. Staff's cost of service study is attached as Appendix D.

#### Summary of Appendix D

Staff has allocated Jonathan Creek's revenue requirement into Commodity, Demand, and Customer components. Sheet D-1 shows the allocation of plant value, which is subsequently used to calculate the percent of total plant value allocated to each component and applied to actual capital expenses on Sheet D-3.

Sheet D-2 allocates total operation and maintenance expenses among the various cost components. Transmission and Distribution expenses were allocated between Demand and Customer, with 50 percent of the expense going into each component. Administrative and General expenses were allocated in the same manner. This method of allocation was used

because a further breakdown of the contents of each expense was unavailable. Staff will recalculate this particular portion of the study if additional information can be provided. Pumping purchased power and chemical expenses were allocated into the Commodity component.

Sheet D-3 provides an allocation of the total revenue requirement among each cost component. The distribution includes debt service and depreciation allocations based on the plant value percentages determined previously on Sheet D-1.

Sheet D-4 shows the recommended customer charge for each size meter. Expenses in the customer charge include all customers billing and collecting expenses, one-half of all administrative and general expenses, and one-half of transmission and distribution expenses. The charge consists of two components, one that is fixed and another that is weighted according to the size of the meter. Business costs or administrative and general and customer billing and collecting are allocated based on the number of bills issued since these costs would not vary depending upon size of meter. Operation costs related to transmission and distribution expenses have been allocated based on meter-size weighted-equivalents. Using weighted-equivalent ratios to compute a portion of the customer charge provides a rational means to allocate the capital costs, maintenance, and testing expense associated with larger meters.

Sheet D-5 provides verification of the recommended rates to ensure that the revenue requirement will be met with the recommended rates. In

addition, the chart shows a breakdown of projected revenues for each meter size classification.

#### Staff Conclusions

It is Staff's understanding that a concern has been raised regarding 5/8-inch metered customers possibly subsidizing the larger-sized metered customers, and that if a customer uses ten percent of the water then that customer should pay ten percent of the cost to operate the system. As indicated earlier, this premise is flawed in that certain costs, such as postage, are allocated to each customer equally regardless of how large the meter or usage. It costs the same to issue and process a bill for 100,000 gallons used as it does for a bill of 1,000 gallons in usage. A cost of service study categorizes and allocates expenses in order to produce rates that should minimize subsidization inherent in rate designs.


Staff recognizes the tremendous increase in consumption during the summer season, and realizes the costs associated with a resort area meeting summer peak-demands while maintaining excess capacities during the off-season. It should be noted that the increase in commercial consumption during the summer season is accompanied by an increase in residential demand, partly due to the number of weekend and summer users in the area and partly because year-round residences also use more water during the summer season. In addition to the change in rates, Staff recommends Jonathan Creek develop a reconnection policy that might help alleviate some of these seasonal problems.

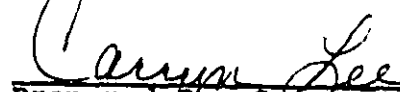



F. Rate Design

Jonathan Creek currently has a declining block rate design that consists of four increments ranging from a 2,000 gallon minimum to an over 40,000 gallon increment. Jonathan Creek proposed to change its rate design to a customer charge and a flat rate per 1,000 gallons for all consumption. Staff recommends that the proposed change in rate design be accepted since it will minimize subsidization that may have occurred under Jonathan Creek's current rate design. Sheet 6 of Appendix D contains a table setting out the current and proposed rates of Jonathan Creek, Staff's recommended rates, and the percentage increase for each size meter. The rates recommended by Staff are set out in Appendix E and will generate the revenue recommended in this report.

C. Signatures

  
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Prepared By: Caryn Lee  
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# APPENDIX A TO STAFF REPORT CASE 94-073

## Jonathan Creek Water District Statement of Audited Operations

	Test Year	Adj.	Pro forma Present Rates
<b>Operating Revenues</b>			
Water Sales	445,528	(19,973)	425,595
Other Water Revenues	18,861	(17,200)	1,631
<b>Total Operating Revenues</b>	<b>464,389</b>	<b>(37,163)</b>	<b>427,226</b>
<b>Operating Expenses</b>			
<b>Operation</b>			
Source of Supply			
Fuel for Power Production	22,441	1,223	23,664
Materials and Supplies	18,755	1,150	19,905
<b>Water Treatment</b>			
Salaries and Wages	30,889	1,666	32,555
Chemicals	26,134	(24,784)	1,350
Materials and Supplies	5,737		5,737
<b>Transmission Dept.</b>			
Salaries and Wages	11,501	1,115	12,616
Materials and Supplies	5,491		5,491
<b>Engineering Dept.</b>			
Salaries and Wages	11,501	1,115	12,616
Materials and Supplies	5,491		5,491
<b>Administration</b>			
Salaries and Wages	11,501	1,115	12,616
Materials and Supplies	5,491		5,491
<b>Depreciation</b>			
Water Treatment	11,501	1,115	12,616
Transmission	5,491		5,491
Engineering	5,491		5,491
Administration	5,491		5,491
<b>Other Expenses</b>			
Salaries and Wages	11,501	1,115	12,616
Materials and Supplies	5,491		5,491
<b>Adj. Expenses</b>			
Salaries and Wages	11,501	1,115	12,616
Materials and Supplies	5,491		5,491
Chemicals	26,134	(24,784)	1,350
Other Expenses	5,491		5,491
<b>Total Operating Expenses</b>	<b>464,389</b>	<b>(37,163)</b>	<b>427,226</b>

APPENDIX A  
TO STAFF REPORT DATED 12/1/78

Jonathan Creek Water District  
Statement of Consolidated Operations

Total O & M	276,127	520	276,797
Depreciation	66,165	97,115	
Taxes Other Than Income Taxes	20,131	(12,347)	
		1,524	9,308
Total Operating Expenses	382,424	79,392	461,816
Net Operating Income	21,915	(115,155)	(93,240)
Other Income (Loss)	1,125		1,125
Net Income (Loss)	23,040	(115,155)	(92,115)

# APPENDIX B TO STAFF REPORT CASE 94-073

## Jonathan Creek Water District Allocation of Revenue Difference

Jonathan Creek's Requested Revenue	\$697,250
Staff's Pro Forma Revenue	(855,135)
Difference to be Allocated to Individual Revenue Requirement Items	(157,885)

	Staff's Revenue Requirement	Percent of Total	Difference Allocated	Adjusted Revenue Requirement
Operating Expenses				
Operation				
Source of Supply				
Fuel for Power Production	25,000	4.0693%	(5,125)	19,875
Materials and Supplies	10,757	2.1808%	(3,443)	15,314
Water Treatment				
Salaries and Wages	46,575	5.4150%	(9,500)	38,025
Chemical	11,370	1.3219%	(3,500)	8,137
Materials and Supplies	10,000	1.0717%	(3,000)	7,000
Trans. and Insp.				
Salaries and Wages	45,000	5.1371%	(9,000)	36,000
Materials and Supplies	10,000	1.0717%	(3,000)	7,000
Maintenance				
Salaries and Wages	10,000	1.0717%	(3,000)	7,000
Materials and Supplies	10,000	1.0717%	(3,000)	7,000
Construction				
Salaries and Wages	10,000	1.0717%	(3,000)	7,000
Materials and Supplies	10,000	1.0717%	(3,000)	7,000
Capital Construction				
Salaries and Wages	10,000	1.0717%	(3,000)	7,000
Materials and Supplies	10,000	1.0717%	(3,000)	7,000
Depreciation				
Salaries and Wages	10,000	1.0717%	(3,000)	7,000
Materials and Supplies	10,000	1.0717%	(3,000)	7,000
Interest				
Salaries and Wages	10,000	1.0717%	(3,000)	7,000
Materials and Supplies	10,000	1.0717%	(3,000)	7,000

APPENDIX B  
TO STAFF REPORT CASE 94-073

Jonathan Creek Water District  
Allocation of Revenue to Expenses

Depreciation	173,710	20.4290%	(32,254)	143,456
Taxes Other Than Income Taxes	9,308	1.0822%	(1,709)	7,599
Debt Service	398,134	46.3068%	(73,112)	325,172
Total	850,099		(157,885)	702,214
Less: Other Operating Income				(1,631)
Interest Income				(3,373)
Jonathan Creek Water District				697,210
				697,210

**APPENDIX C**

**BILLING ANALYSIS**

# **BILLING ANALYSIS SUMMARY**

Minimum Customer Consumption By Meter Size And Customer Consumption Breakdown	Number of Bills 1993	Number of Gallons Consumed 1993	Existing Water Rates	Revenue From Water Sales 1993
First 2,000				
5/8"	19,479	29,269,900	\$9.50	\$185,050
3/4"	132	224,300	12.90	\$1,703
1.0"	469	844,300	20.50	\$9,614
1.5"	90	178,000	30.15	\$2,713
2.0"	122	210,300	43.90	\$5,358
3.0"	32	57,800	88.35	\$2,763
4.0"	0	0	128.80	\$0
Next 23,000		45,844,800	\$3.40 Per 1,000 Gallons	\$155,873
Next 15,000		3,894,400	\$1.60 Per 1,000 Gallons	\$6,231
Over 40,000		<u>15,098,000</u>	\$1.35 Per 1,000 Gallons	<u>\$20,380</u>
Sub-Total		95,609,900		\$389,683
Kenlake State Resort Park (8.0" Meter)				
First 2,000 Gallons	12	24,000	\$175.65	\$2,108
Over 2,000 Gallons		15,578,100	\$1.35 Per 1,000 Gallons	\$21,030
Wesley Village Units	1516			
First 1,200 Gallons		1,819,200	\$6.15 Per Unit Included in Minimum	\$9,323
Next 23,800 Gallons		571,200	\$2.55 Per 1,000 Gallons	\$1,457
Next 15,000 Gallons		360,000	\$1.35 Per 1,000 Gallons	\$486
Over 40,000 Gallons		<u>1,311,700</u>	\$1.15 Per 1,000 Gallons	<u>\$1,508</u>
Total		115,274,100		\$425,595



## **APPENDIX D**

### **COST OF SERVICE STUDY**

## ALLOCATION OF PLANT VALUE

	<u>Total</u>	<u>Commodity</u>	<u>Demand</u>	<u>Customer</u>
Source of Supply & Pumping Plant	160,377	0	160,377	0
Treatment Plant	367,022	0	367,022	0
Transmission, Distribution Mains, and Storage	1,634,067	0	1,634,067	0
Services	55,777	0	0	55,777
Meters	201,546	0	0	201,546
Hydrants	124,324	0	0	124,324
General Plant (1)	183,617	0	156,061	27,556
	<hr/>			
<b>TOTAL</b>	<b>2,726,730</b>	<b>0</b>	<b>2,317,527</b>	<b>409,203</b>

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(1) Allocated based on overall weighted allocation of all other plant value.

SOURCE: 1993 Annual Report

**ALLOCATION OF OPERATION & MAINTENANCE EXPENSE**

	<u>Total</u>	<u>Commodity</u>	<u>Demand</u>	<u>Customer</u>
Source of Supply and Pumping:				
Operation	20,487	0	20,487	0
Purchased Power	28,575	28,575	0	0
Treatment System:				
Operation	13,968	9,283	4,685	0
Maintenance	38,025	0	38,025	0
Transmission & Distribution:				
Salaries and Wages	36,748	0	18,374	18,374
Materials and Supplies	4,545	0	2,273	2,273
Customer Billing and Collecting:	10,399	0	0	10,399
Administration and General:	73,051	0	36,526	36,526
<b>TOTAL OPERATION &amp; MAINTENANCE EXPENSE</b>	<b>225,798</b>	<b>37,858</b>	<b>120,389</b>	<b>67,571</b>

# **ALLOCATION OF COSTS OF SERVICE**

	<u>Total</u>	<u>Commodity</u>	<u>Demand</u>	<u>Customer</u>
Allocated Plant Value	2,726,730	0	2,317,527	409,203
Percentages	100.00%	0.00%	84.99%	15.01%
Operation and Maintenance Expense	225,798	37,858	120,369	67,571
Capital Related Expense (1)	476,227	0	404,759	71,468
General Water Service Cost	702,025	37,858	525,128	139,039
Less Other Revenue	4,964	0	3,333	1,631
Plus Bad Debt Expense	190	0	0	190
Required Revenue from Rates	\$697,251.00	\$37,858.00	\$521,795.23	\$137,597.77

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(1) Capital Related Expense = Debt Service + Depreciation + Taxes Other Than Income Taxes  
Allocation based on Allocated Plant Value

# **CALCULATION OF CUSTOMER CHARGE**

<b>Meter Size</b>	<b># of Meters</b>	<b>Equivalent Ratio</b>	<b>Equivalent 5/8" Meter</b>	<b>Weighted</b>	<b>Fixed (1)</b>	<b>Customer Charge</b>
5/8"	1624	1.0	1624.0	\$3.81	\$2.31	\$6.12
3/4"	11	1.5	16.5	\$5.71	\$2.31	\$8.02
1.0"	40	2.5	100.0	\$9.52	\$2.31	\$11.83
1.5"	8	5.0	40.0	\$19.05	\$2.31	\$21.36
2.0"	13	8.0	104.0	\$30.47	\$2.31	\$32.78
3.0"	3	15.0	45.0	\$57.14	\$2.31	\$59.45
6.0"	<u>1</u>	50.0	<u>50.0</u>	\$190.46	\$2.31	\$192.77
	1700		1979.5			

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(1) Administrative and General and Customer Billing and Collecting Expenses are allocated based on number of meters.

Number of Meters                      1700  
    \$47,114.50  
    \$2.31

All other costs based on size-weighted equivalents.

# **VERIFICATION OF RECOMMENDED RATES**

## **CUSTOMER CHARGES**

<u>Meter Size</u>	<u>Meters</u>	<u>Monthly Rate</u>	<u>Revenue</u>
5/8"	1624	\$6.12	\$9,936.79
3/4"	11	\$8.02	\$88.26
1.0"	40	\$11.83	\$473.30
1.5"	8	\$21.36	\$170.84
2.0"	13	\$32.78	\$426.18
3.0"	3	\$59.45	\$178.34
6.0"	1	\$192.77	\$192.77
			<hr/>
			\$11,466.48
			x 12
			<hr/>
			\$137,597.77

## **WATER CHARGES**

	<u>Gallons</u>	<u>Rate</u>	<u>Revenue</u>
All Water Usage	115,274.100	\$4.85	\$559,653.23

Customer Charges	\$137,597.77
Water Charges	<u>559,653.23</u>
Total Revenue from Water Sales	\$697,251.00
Other Operating Revenue	1,631.00
Non-Operating Revenue	<u>3,333.00</u>
Total Revenue Requirement	\$702,215.00

**CUSTOMER CHARGES**

<u>Meter Size</u>	<u>Avg Usage</u>	<u>Current Bill</u>	<u>JCWD</u>		<u>STAFF</u>	
			<u>Bill</u>	<u>%</u>	<u>Bill</u>	<u>%</u>
5/8"	4,000	\$16.30	\$23.72	45.52%	\$25.52	56.56%
3/4"	12,000	\$46.80	\$75.05	60.02%	\$66.22	41.19%
1.0"	20,000	\$81.70	\$135.17	65.45%	\$108.83	33.21%
1.5"	25,000	\$108.35	\$383.23	235.24%	\$142.61	31.62%
2.0"	50,000	\$159.60	\$310.33	94.44%	\$275.28	72.48%
3.0"	100,000	\$269.55	\$840.42	137.59%	\$544.45	101.98%
6.0"	1,000,000	\$1,527.00	\$6,678.50	337.35%	\$5,042.77	230.24%

**APPENDIX E  
TO STAFF REPORT CASE NO 94-073**

The Staff recommends the following rates be prescribed for customers of Jonathan Creek Water District.

**Monthly Customer Charge**

5/8 inch meter	\$ 6.12
3/4 inch meter	8.02
1.0 inch meter	11.83
1.5 inch meter	21.36
2.0 inch meter	32.78
3.0 inch meter	59.45
6.0 inch meter	192.77

**Water Charge**

All usage	\$4.85 per 1,000 gallons
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